Index of Claims

| Application/Control No. | Applicant(s)/Patent under Reexamination | Applicant(s)/Patent under Reexamination |  |  |  |  |  |  |  |
|-------------------------|---|---|--|--|--|--|--|--|--|
| 10/684,213              | HANNIGAN ET AL.                         | HANNIGAN ET AL.                         |  |  |  |  |  |  |  |
| Examiner                | Art Unit                                | Art Unit                                |  |  |  |  |  |  |  |
| Abolfazi Tabatabai      | 2623                                    | 2623                                    |  |  |  |  |  |  |  |

| , | Rejected | _ | (Through numeral)<br>Cancelled |
|---|----------|---|--------------------------------|
| = | Allowed  | + | Restricted                     |

| N | Non-Elected  | A | Appeal   |
|---|--------------|---|----------|
| I | Interference | o | Objected |

| Cla                    | aim      | Ĺ        |          |          | (        | Date     | е        |  |  |  | ]     | CI        | aim      |                 |          |   | Date   | -        |  |         | C     | aim      | Date           |          |         |              |  |                 |           |           |
|------------------------|----------|----------|----------|----------|----------|----------|----------|--|--|--|-------|-----------|----------|-----------------|----------|---|--|----------|--|---------|-------|----------|----------------|----------|---------|--------------|--|-----------------|-----------|-----------|
| Final                  | Original | 1/11/06  |          |          |          |          |          |  |  |  |       | Final     | Original |                 |          |   |  |          |  |         | Final | Original |                |          |         |              |  |                 |           |           |
| 1                      | Ď        | Ξ        |          |          |          |          |          |  | L  |  |       |           | 51       |                 |          | 1                                       | П  | 1        |  | ]       |       | 101      |                | $\Box$   | Ţ       |              |  |                 | $\exists$ | コ         |
| 2                      | 2        | =        | Н        |          | ⊢        | L        | <u> </u> | ┞-   | ╄  | ₩  | -     |           | 52       | ₩               | -        | -                                       | $\square$  |          |  | -       |       | 102      | $\blacksquare$ |          | 4.      | ↓_           | <u> </u>                               | Ш               | _         | _         |
| 3                      | 3        | =        | -        |          |          | L        | <u> </u> | _  | ╄  | _  | -     | ļ         | 53       | $\vdash$        | 丰        | 4                                       | $\sqcup$   |          | <del>                                     </del>   | ┦∭      |       | 103      | Ш              | $\perp$  | 丄       | ╄            | ــــــــــــــــــــــــــــــــــــــ | Ш               | $\dashv$  | _         |
| 4                      | 4        | Ξ        | $\sqcup$ | _        | _        | _        | _        | <u> </u>   | ↓_   | 1  |       |           | 54       |                 | _        | 4                                       | $\vdash$   |          | ++   | - ::::: |       | 104      |                | $\perp$  | 4       | ╄-           | <u>L</u>                               |                 | $\dashv$  | _         |
| _5_                    | 5        | 트        | $\Box$   |          |          | L        |          | <u> </u>   | ↓_   | _  |       |           | 55       |                 | $\perp$  |   | 1  | _        |  | ┚       |       | 105      |                |          | $\perp$ | L            | L                                      |                 | Щ         | _         |
| 6                      | 6        | =        |          |          |          |          | L        | <u> </u>   | 上  |  |       |           | 56       | $\sqcup$        |          | ┵                                       | Ш  |          |  |         |       | 106      |                |          | $\perp$ | ┖            | L                                      | Ш               |           |           |
| 7                      | 7        | 트        | Ш        |          |          | L        | L        | ┖  | 1_   | ┖  |       |           | 57       |                 |          |   |  |          |  | ⅃᠁      |       | 107      |                |          |         | L            | L                                      |                 | - 1       |           |
| 8                      | 8        | ٥        |          |          |          |          | _        |  | 1_   |  |       |           | 58       |                 | $\perp$  |   |  |          |  | ]       |       | 108      |                |          |         |              |  |                 |           |           |
| 9                      | 9        | =        | $\Box$   |          |          |          |          | L  | L  | L  |       | <u></u>   | 59       | $\sqcup$        |          |   |  |          |  | ]       |       | 109      |                |          | $\perp$ |              |  |                 |           |           |
| 10                     | 10       | =        |          |          |          |          |          |  |  |  |       |           | 60       |                 |          |   |  |          |  | ]       |       | 110      |                |          |         |              |  |                 |           |           |
| 11                     | 11       | =        |          |          |          |          |          |  |  |  | ]     |           | 61       |                 |          |   | ·  |          |  | ]       |       | 111      |                |          |         | Τ            |  |                 | П         |           |
| 12                     | (12)     | =        |          |          |          |          |          |  |  | L  | ]:::: |           | 62       |                 |          |   |  |          | $\mathbf{L}$                                       | 7       |       | 112      |                |          | Т       | П            | Г                                      | П               | П         |           |
| 13                     | 13       | =        |          |          |          |          |          |  |  |  | ]     |           | 63       |                 |          |   |  |          | H  | 7       |       | 113      |                |          | T       | T            | Π                                      |                 | П         |           |
| 14                     | 14       | =        |          |          |          |          |          |  |  |  |       |           | 64       | П               |          | T                                       | $\Box$   |          |  | 7       |       | 114      |                |          | T       |              |  |                 | $\Box$    | $\Box$    |
| 15                     | 15       | =        |          |          |          |          |          |  |  |  | ]     |           | 65_      |                 |          | $\mathbf{I}^{-}$                        |  | T        |  |         |       | 115      |                | $\neg$   | Т       |              |  | П               | $\neg$    | $\neg$    |
| 16                     | (16)     | =        |          |          |          |          |          |  | Г  | Π  | 1     |           | 66       | П               |          | Т                                       |  |          |  | 7       |       | 116      |                |          | Τ       | T            |  | П               | П         |           |
| 17                     | 17       | =        | $\neg$   |          |          | Г        | Γ        | Π  | П  |  |       |           | 67       | П               | $\neg$   | $\top$                                  | П  |          |  | 7       |       | 117      |                |          | $\top$  | T            |  |                 | $\neg$    |           |
| 18                     | 18       | =        |          |          |          |          | Г        |  | T  |  | 1     |           | 68       |                 | $\neg$   |   | 1  |          |  | 7       |       | 118      |                |          | $\top$  | 1            | T                                      | П               | $\neg$    | T         |
| 19                     | 19       | =        | П        |          |          |          |          | Г  | T  |  | 1     |           | 69       |                 | $\neg$   | $\top$                                  | $\vdash$   |          |  | 1       |       | 119      |                | $\neg$   | +-      | 十一           | ऻ                                      |                 | $\neg$    |           |
| 20                     | 20       | =        | $\dashv$ |          |          | П        |          | 1  |  | 1  | 1     |           | 70       | $\Box$          | _        | _                                       | 1.   | $\neg$   | 1-1-   | 7::::   |       | 120      |                | _        | +       | T            | $\vdash$                               |                 | $\neg$    | $\exists$ |
| 21                     | 2)       | =        | $\neg$   |          |          |          | -        | T  | $\vdash$   |  | 1     | $\vdash$  | 71       | $\vdash$        | _        | $\top$                                  | H  |          | 1  | 1       |       | 121      | $\dashv$       |          | +-      | †            | 1                                      | Н               | $\dashv$  | $\neg$    |
| 22                     | 22       | =        | $\dashv$ | _        | _        | Н        | $\vdash$ | ┢┈   | ╁  | †-   | 惴     | _         | 72       | 1               | $\dashv$ | +-                                      | $\vdash$   | +        | +  | 1::::   |       | 122      | Н              | $\dashv$ | +       | +            | ╁                                      | Н               | $\neg$    | ᅥ         |
| 23                     | 23       | =        |          | $\neg$   | -        |          | -        | 1  | $\vdash$   | t  | ╢     |           | 73       | $\vdash$        |          | +-                                      | $\vdash$   | $\dashv$ | <del>      -</del>                                 | 1::::   |       | 123      | $\vdash$       | +        | +       | +            | ╁                                      | $\vdash$        | $\dashv$  | ╗         |
| 24                     | 24       | =        | $\dashv$ | _        | -        |          | ┢        |  | ╁  | +  | 惴     |           | 74       |                 | 十        | +                                       | <del>                                     </del> | $\dashv$ | <del>  -   -</del>                                 | 1       |       | 124      | -              |          | +-      | ╁╌           | ╁                                      | Н               | $\dashv$  | ⊣         |
| 25                     | 25       | =        |          | _        |          | Н        | $\vdash$ | ┰  | $\vdash$   | t  | 1     | -         | 75       | H               | +        | +                                       | t  |          | 1  | 1       |       | 125      | $\dashv$       | $\dashv$ | +       | ╁╾           | ╁                                      | H               | $\dashv$  | $\dashv$  |
| 26                     | 26       | =        | $\neg$   |          |          |          |          | $\vdash$   | $\vdash$   | t  | 1     | _         | 76       |                 | -        | +                                       | H  | +        |  | 1       |       | 126      | H              | _        | +-      | ╁            | ┢                                      | Н               | $\dashv$  | ᅥ         |
| 27                     | 27       | =        | _        | $\neg$   |          |          | -        |  | 1  | $\vdash$   | 1     |           | 77       | $\vdash$        | +        | +                                       | H  | $\dashv$ | 1  | 1       |       | 127      | -              |          | ╁       | +            | ╁╌                                     | $\vdash$        | $\dashv$  | $\dashv$  |
|                        | 28       | -        |          | $\dashv$ |          |          | $\vdash$ | $\vdash$   | $\vdash$   | ╁╌   | 1     | _         | 78       | $\vdash$        | $\dashv$ | +                                       | H  | $\dashv$ |  | -       |       | 128      | -              | _        | +-      | +            | ╁                                      | $\vdash$        | -         | $\dashv$  |
| $\vdash$               | 29       |          | $\dashv$ | $\dashv$ |          | H        | _        | t  | H  | t  | 1     | _         | 79       | -               | -        | +                                       | Н  | $\dashv$ | ++   | -       |       | 129      | $\dashv$       |          | +       | +            | 一                                      | H               | $\dashv$  | ᅱ         |
|                        | 30       |          |          | $\dashv$ |          | Н        | -        | $\vdash$   | ┰  | 1  | 1     | <u> </u>  | 80       | $\vdash$        | $\dashv$ | +                                       | H  | -        | 1-1-   | -       |       | 130      | $\dashv$       | $\dashv$ | +       | -            | ╁                                      | $\vdash$        | $\dashv$  | ┥         |
| $\vdash$               | 31       |          |          | $\dashv$ |          | Н        | -        | $\vdash$   | $\vdash$   | $\vdash$   | ı     | $\vdash$  | 81       | $\vdash$        | 十        | +                                       | $\vdash$   | -        | <del>    -   -</del>                               | 1 1     |       | 131      | $\vdash$       | $\dashv$ | +       | ╁            | ┢                                      | Н               | $\dashv$  | $\dashv$  |
|                        | 32       |          | $\dashv$ | _        |          | H        |          | ┢  | ┢  |  |       |           | 82       | $\vdash$        |          | +                                       | $\Box$   |          | +  | 1       |       | 132      | -              | $\dashv$ | ╁       | +            | ┢                                      | H               | -+        | $\dashv$  |
|                        | 33       |          |          | T        |          | Н        |          | H  | 1  | ✝  | 1     |           | 83       | $\vdash$        | _        | 1                                       | $\vdash$   |          | 1-1-   | 1       |       | 133      | $\dashv$       | $\dashv$ | +       | $\vdash$     | ┢                                      |                 | $\dashv$  | $\dashv$  |
|                        | 34       |          |          |          | -        |          | -        | <del>                                     </del> | <u> </u>   | H  | ı     | <u> </u>  | 84       | $\vdash$        | _        | +                                       | Н  | _        | <del>   -</del>                                    | 1       |       | 134      |                | +        | +       | +-           | 1                                      | $\vdash$        | $\dashv$  | ᅱ         |
|                        | 35       |          | _        | ┪        |          |          | _        |  | _  | <del>                                     </del> | 1     |           | 85       | $\vdash$        | $\dashv$ | +                                       | Н  |          | <del>                                     </del>   | ╢╢      |       | 135      | $\dashv$       | $\dashv$ | +       | $\mathbf{I}$ | $\vdash$                               | $\vdash$        | $\dashv$  | $\dashv$  |
| $\vdash$               | 36       | $\dashv$ | $\dashv$ | -        | $\dashv$ | Н        |          | <del>                                     </del> | <del>                                     </del> | $\vdash$   | ı     | $\vdash$  | 86       | $\vdash \vdash$ | +        | +-                                      | $\vdash$   | +        | <del>  -   -</del>                                 | 1       |       | 136      | $\dashv$       | +        | +       | ╁            | -                                      | $\vdash \vdash$ | +         | $\dashv$  |
| $\vdash$               | 37       | -        | +        | $\dashv$ | _        | Н        | $\vdash$ | $\vdash$   | -  | $\vdash$   | 1     | <b></b> - | 87       | $\vdash \vdash$ | ╅        | ╅                                       | H  | $\dashv$ | ++   | ┨╗╗╏    |       | 137      | $\vdash$       | +        | +-      | ╁            | $\vdash$                               | $\vdash$        | $\dashv$  | $\dashv$  |
| $\vdash \vdash \vdash$ | 38       | $\dashv$ | $\dashv$ | ᅱ        | -        | $\vdash$ | $\vdash$ | $\vdash$   | $\vdash$   | 1  | l     | _         | 88       |                 | $\dashv$ | +                                       | $\vdash$   | +        | <del>                                     </del>   | ┧┈╟     |       | 138      | $\dashv$       | +        | +       | ╁            | -                                      | $\vdash$        | $\dashv$  | $\dashv$  |
|                        | 39       | $\dashv$ | $\dashv$ | -        | $\dashv$ | Н        | $\vdash$ | $\vdash$   | 1-   | <del>                                     </del> | l     | H         | 89       | $\vdash$        | +        | +                                       | $\vdash$   | +        | +  | ╢╢      |       | 139      | -              | $\dashv$ | +-      | ╁            | -                                      | $\vdash$        | $\dashv$  | $\dashv$  |
|                        | 40       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ | _        |  | -  | ╁  | l     | <u> </u>  | 90       | $\vdash$        | +        | +                                       | $\vdash$   | +        | + +  | ╢╟      |       | 140      | -              |          | +-      | +-           | -                                      | $\vdash$        | +         | $\dashv$  |
| $\vdash$               | 41       | $\dashv$ | $\dashv$ | ᅱ        |          | $\vdash$ | -        | H  | H  | $\vdash$   | liii  |           | 91       | $\vdash$        | +        | +-                                      | $\vdash$   |          | +-+-   | ┨┋╏     | -     | 141      | $\dashv$       | +        | +       | $\vdash$     | -                                      | $\vdash$        | $\dashv$  | $\dashv$  |
|                        | 42       | $\dashv$ | -        | $\dashv$ |          | $\vdash$ | $\vdash$ | <del>                                     </del> | t-   | $\vdash$   | l     | -         | 92       | $\vdash$        | $\dashv$ | +-                                      | $\vdash \vdash$                                  |          | + +  | ╢╢      |       | 142      | -              | +-       | +-      | $\vdash$     | $\vdash$                               | $\vdash \dashv$ | $\dashv$  | $\dashv$  |
| $\vdash$               | 43       | $\dashv$ | -+       | ┥        | -        | -        |          | $\vdash$   | <del>  -</del>                                   | -  |       |           | 93       | $\vdash$        | +-       | +-                                      | ┝╌┤  |          | <del>                                     </del>   | ╢       | -+    | 143      |                | - -      | +       | ┼            | -                                      | $\vdash$        | $\dashv$  | $\dashv$  |
| Н                      | 44       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | -        | H        | $\vdash$   | $\vdash$   | $\vdash$   |       |           | 94       | $\vdash$        | +        | +                                       | ┝╌┤  | $\dashv$ | ++   | ╢╟      | -     | 144      | -+             | +        | +-      | ┰            | $\vdash$                               | $\vdash \vdash$ | $\dashv$  | $\dashv$  |
| $\vdash \vdash$        | 45       | $\dashv$ | -        | -+       |          | $\vdash$ | $\vdash$ | $\vdash$   | ┰  | $\vdash$   |       |           | 95       | $\dashv$        | $\dashv$ |   | $\vdash \vdash$                                  | - -      | <del>                                     </del>   | ┨┈╟     | -     | 145      | $\dashv$       |          | ╁       | ╁            | H                                      | $\dashv$        | $\dashv$  | $\dashv$  |
| $\vdash \vdash \vdash$ | 46       | $\dashv$ | 十        | ᅥ        | -        | $\vdash$ | $\vdash$ |  | $\vdash$   | <del> </del>                                     |       |           | 96       | +               | +        | +                                       | $\vdash \vdash$                                  |          | <del>  </del>                                      | ╢╟      |       | 146      | +              |          | +       | +            | $\vdash$                               | $\dashv$        | $\dashv$  | $\dashv$  |
| $\vdash \vdash$        | 47       | _        | $\dashv$ | 7        | $\neg$   | -        | H        |  | $\vdash$   | $\vdash$   |       |           | 97       | $\vdash$        | +        | +-                                      | $\vdash \vdash$                                  | $\dashv$ | <del>                                       </del> | ╢╟      | -     | 147      | $\dashv$       | +        | +       | $\vdash$     | $\vdash$                               | $\dashv$        | $\dashv$  | $\dashv$  |
| $\vdash \vdash \vdash$ | 48       |          | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ | H  | $\vdash$   | $\vdash$   |       |           | 98       | -+              | +        | +-                                      | $\vdash$   | _        | <del>  -   -</del>                                 | ┧┈╟     |       | 148      | -+             | +        | +       | $\vdash$     | $\vdash$                               | -               | $\dashv$  | $\dashv$  |
|                        | 49       | _        | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$ |          | Н  | ┢  | $\vdash$   |       |           | 99       | - +             | +        | +-                                      | $\vdash$   | +        | <del>   -</del>                                    | ┧┈╟     |       | 149      | -+             | -+-      | +       | ┢            | $\vdash$                               | $\dashv$        | $\dashv$  | $\dashv$  |
| $\vdash$               | 50       | $\dashv$ | $\dashv$ | ᅥ        | $\dashv$ | +        |          | Н  | $\vdash$   | $\vdash$   |       |           | 100      | +               | $\dashv$ | +-                                      | $\vdash \vdash$                                  |          | <del>   -</del>                                    | 1 1     |       | 150      | $\dashv$       | +        | ╁       | ╆            | Н                                      | $\dashv$        | $\dashv$  | $\dashv$  |
|                        | <u> </u> |          |          | _        |          |          |          |  | Щ.   |  | J     |           | 100      |                 |          | نــــــــــــــــــــــــــــــــــــــ |  |          |  | ]:[     |       | 130      |                |          |         | 1            | ш                                      | Ш               |           |           |